## 30. BURNING OUT THE BLACK DAMMAR, *CANARIUM STRICTUM* ROXB.

The Black Dammar tree *Canarium strictum,* belonging to the family Burseraceae is one of the most strikingly handsome trees occurring in the moist evergreen forests of the Western Ghats. It is quite common between 600-1500 metres in the Anamalai hills. The tree is very large, with a smooth white cylindrical trunk and large pinnate leaves which when very young are velvety crimson, turning rusty tomentose with age. So distinctive is its crown that one could, after little familiarisation, discern the tree from the canopy mosaic even from some distance.

This beautiful tree produces a black resin which could perhaps result in its disappearance. When burned, the resin produces clouds of fragrant white fumes. Its Tamil name is *Karuppu Kungiliam.* The resin is widely used in homes and business establishments, both as a purported mosquito-repellant and a talisman against "evil-eyes". It is extracted by simply burning the base of the trunk. From the burned out bark, the resin oozes out and then coagulates into sticky chunks. the chunks are then sold for anywhere between Rs. 18 and Rs. 25 a Kilo, a significant sum for a tribal.

In course of my fruiting-phenology work in Karian shola and other patches of evergreen forests, I found several of these trees with burned bases. All the adult trees have been burnt at some time or other in the past, and the few young trees show signs of being explored for tapping. Some of the trees are in such bad shape that a good portion of the base has caved in and the part of the trunk still holding the tree is lined with black charred wood. One of the trees leans under its own weight apparently due to the disintegrating base. Even the ones with partially damaged trunks stand a risk of being toppled by monsoon gusts. I found at least one such tell-tale stump in the middle of the forest.

My tribal field assistant Natarajan, as excellent conservation minded naturalist, tells me that the resin can be extracted by merely scarring the bark. The process, although very slow, ensures a supply of resin over several decades without killing the tree, he says. Burning is a shorter and more destructive way of getting a bountiful resin within a span of few years. The heat generated by the fire accelerates the exudation and in no time renders the trunk dry, weak and vulnerable. Evidently this is the same strategy as killing the goose which lays golden eggs.

Extraction of *Kungiliam* has been officially banned in the Indira Gandhi Wildlife Sanctuary since last year. But what future is in store for the trees with already burned trunks? What has been the impact of the burning on the population of these trees along its overall range, i.e. is this species threatened? Natarajan says that the opening of the bark layer paves the way for infection which eventually kills the tree. Surely this is a conservation issue which requires attention.

The status and welfare of the Black Dammar is of relevance to my ongoing study on the conservation of the endangered Great Pied Hornbill. It is well-known amongst biologists who study plant-animal co-evolution that the plant family Burseraceae, to which this tree belongs, along with the families Lauraceae and Palmae, constitute an important source of large-seeded lipid-rich fruits for specialist frugivorous birds like hornbills. This summer, I recovered a *Canarium strictum* seed from the nest excreta of a Great Hornbill. Even a small amount of these fruits, with their nutritionally high quality pulp, could go a long way in meeting the energy requrements of the hornbills. And interestingly the tree's fruiting season coincides with the breeding season of the Great Hornbill, a time when nutritional demands on the parents and young are the highest. My research is just beginning to reveal the role played by the hornbills in the propagation of large forest trees. We see thus, a clear illustration of how the survival of just one tree species can be crucially linked to the well being of the whole community.

June 13, 1992 R. KANNAN

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